

**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 22-Nov-14

Time 6:51 AM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 1234 Const Calendar Day: 807 Date: 20-Aug-2014 Wednesday

Inspector Name: Brignano, Bob Title: Transportation Engineer

Inspection Type:

Shift Hours: Break: Over Time:

Federal ID:

Location:

Reviewer: Schmitt, Alex Approved Date: Status: Submit

**04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge****Weather**

Temperature 7 AM

12 PM

4PM

Precipitation

Condition overcast am, clear pm

Working Day ☒ If no, explain:**Diary:**

Dispute

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:

The status of the 2 test rigs in this current phase of the Townsend Test (Test IV) is as follows:

Rod 18 (Dry 2008 Rod, ID S1-A7, Bottom): Tensioned to 0.40 Fu Today

Rod 19 (Dry 2008 Rod, ID S2-H6, Bottom): Tensioned to 0.40 Fu Today

ABF Engineer Kelvin Chen is working part time in the field and office on CCO 314.

There is work in the field for the scheduled jacking step at TR's 18 & 19. Crews at the Pier 7 warehouse are working an 8-hour shift 0600 through 1430. Working on the CCO operation today are Ironworker Jared Garrett (~0920~0950 for ~1/2 hr), Ironworker Jonathan Canites (~0920~0950 for ~1/2 hr), and Ironworker Ricky Damboise (~0925~0950 for ~1/2 hr). The non-CCO 314 operations elsewhere at the Pier 7 warehouse area at other times in the day are not covered by this diary.

VGO is on site today for the jacking step at TR's 18 & 19. From VGO, Dave Van Dyke and Mattea start work on site at ~0800. They work on the morning data reports before this morning's scheduled tensioning step. VGO is present for live data display during the jacking step at the test rigs. Then, VGO works on the data reports from the jacking step at the test rigs. VGO leaves the site ~1030. VGO continues offsite work on data and report issues. Mattea flies out of the Bay Area this afternoon to go back to Oregon. At the end of the day, VGO produces and sends the pm data reports.

For the jacking step at the 2 test rigs, present from the DJV is Luis Funes. Present from CT-METS for AE is Elijah Turner (communicate with Mistras personnel offsite). Three ABF ironworkers are present to deal with an issue with the hydraulic pump, operate the hydraulic pump, and tighten the nut, with VGO present to monitor the loads being used to guide the operations.

Test Rig #18 (Dry 2008 Rod, ID S1-A7, Bottom) Jacking Step:

This is the 2nd jacking step and the rod is being jacked to 0.40 Fu. The post-seating of the nut target is 334.320 +10/-0 kips. The expected hydraulic pressure at this locked off force is 2,400 psi. Based on the previous jacking step (8/18/2014 - 0.30 Fu), the expected seating loss is at least 21 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~355~365 kips. The tension on the rod at the start of the operation is 258 kips (the 0.30 Fu load left on the rod 2 days ago was 260 kips for a delta of -2 kips, with this tension difference possibly due to thermal differences between 8/18/2014 and today).

Jacking is started at 0923. As the ironworkers start to pump the hydraulic oil, the pump power kicks out,



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similar to what has happened during some recent jacking operations. There is some hydraulic oil left under pressure in the lines to the jacks at this time, with the pressure about 3/4 of the way to the target, with a slight increase (on the order of 10 kips) in the tension in the rod from this partial jacking effort to unseat the nut. Regarding the power issue with the pump, there was an attempt to fix this problem 2 days ago (8/18/2014) after the jacking step, and the problem was thought to be solved, but it is happening again today. A third ironworker (from ABF's tool room / mechanics operation) arrives a few minutes later to assist with a check of the hydraulic pump. The ironworkers examine the electrical connections in the hydraulic pump and fix a loose wire. This appears to fix the electrical problem with the hydraulic pump. The third ironworker remains at the jacking operation for its duration in case this problem occurs again.

Jacking is restarted at 0937, after a delay of more than 10 minutes due to the electrical issue with the hydraulic pump. At 2,400 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 311 kips. The hydraulic pressure is increased to 2,800 psi and the primary strain gauges give a force of 368 kips. The AE is checked with the ok given at 0940. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 367 kips (bleed loss = 1 kip). After bleeding off the jacks, the primary strain gauges give a force of 339 kips (seating loss = 28 kips). The force is within the specified tolerance.

Test Rig #19 (Dry 2008 Rod, ID S2-H6, Bottom) Jacking Step:

This is the 2nd jacking step and the rod is being jacked to 0.40 Fu. The post-seating of the nut target is 334.320 +10/-0 kips. The expected hydraulic pressure at this locked off force is 2,400 psi. Based on the previous jacking step (8/18/2014 - 0.30 Fu), the expected seating loss is at least 23 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~355~365 kips. The tension on the rod at the start of the operation is 254 kips (the 0.30 Fu load left on the rod 2 days ago was 256 kips for a delta of -2 kips, with this tension difference possibly due to thermal differences between 8/18/2014 and today). Jacking is started at 0942. At 2,400 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 320 kips. The hydraulic pressure is increased to 2,800 psi and the primary strain gauges give a force of 369 kips. The AE is checked with the ok given at 0945. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 365 kips (bleed loss = 4 kips). After bleeding off the jacks, the primary strain gauges give a force of 335.5 kips (seating loss = 30 kips). The force is within the specified tolerance – it is about 1 kip from the bottom end of the tolerance.

A 7kW generator – Whisperwatt 7000 – ABF ID 002343 is on idle/standby at the test rig work area. A 40kW generator – MQ Power 40 – ABF ID 002051 is used briefly for the jacking operations and is on idle/standby at the test rig work area the remainder of the day. A Hydraulic Pump for running the jacks is used briefly for the jacking operations and is on idle/standby at the test rig work area the remainder of the day. A Kubota Cart is used by the first 2 ironworkers to arrive at the test rig work area and another Kubota Cart is used by the third ironworker who arrived later at the test rig site for a maintenance issue with the hydraulic pump at the test rig work area.

Note that there is k-rail at this work area. All the remaining k-rail at the CCO 314 test rig site is State owned. There are 20 pieces of 10' bought k-rail. Of the 20 pieces, 16 are installed in test rigs and 4 are spare/extra k-rail that are set aside.

To elevate k-rail and sandbags, crane mats (built from 12x12's) and timber blocking (12x12's) are used.

The crane mat and 12x12's quantities are as follows:

1 each 4'x20' crane mat (1 x 80 LF)
1 each 5'x19' crane mat (1 x 95 LF)
2 each 5'x20' crane mats (2 x 100 LF)
2 each 5'x16' crane mat (2 x 80 LF)
~64 LF additional 12x12's
Total 12x12's quantity = 599 LF ~ 600 LF

The agreed extra work with ABF is as follows:

Ironworker Jared Garrett - 0.5 hr

Ironworker Jonathan Canites - 0.5 hr



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Ironworker Ricky Damboise - 0.5 hr

Engineer Kelvin Chen - 0.5 hr

40 kW Generator - 0.5 hr

12x12 timber - 600 LF

See the attached Extra Work Order - Signed with ABF for CCO 314 work